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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,815	10/12/1999	KLAUS-PETER LINDNER	9090-0149	5340

7590 01/22/2004
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EXAMINER

GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 01/22/2004

27

Please find below and/or attached an Office communication concerning this application or proceeding.

PR4

Office Action Summary

Application No.

09/415,815

Applicant(s)

LINDNER ET AL.

Examiner

Eduardo Garcia-Otero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION: Non-Final Action

Introduction

1. Title is: APPARATUS FOR USE IN AN INDUSTRIAL PROCESS AND PLANT INCLUDING SUCH APPARATUSES AS WELL AS METHOD FOR SIMULATING OPERATION OF SUCH A PLANT
2. First joint inventor is: LINDNER
3. Applicant's Amendment was received 11/18/03.
4. Claims 1-37 are cancelled, and claims 38-48 are new.
5. Note that Applicant's Continued Prosecution Application (CPA) is interpreted and entered into the file as a Request For Consideration (RCE).
6. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) to 10/29/98.

Index of Prior Art

7. **McClanahan** refers to McClanahan et al., US Patent 4,613,952
8. **Banks** refers to Handbook of Simulation: Principles, Methodology, Advances, Applications, and Practice, by Jerry Banks (Editor), John Wiley & Sons, Inc., ISBN: 0-471-13403-1, August 1998.
9. **Tucker** refers to The Computer Science and Engineering Handbook, by Allen B. Tucker, Jr. (Editor-in-chief), CRC Press, ISBN: 0-8493-2909-4, 1996.
10. **Tabak** refers to Advanced Microprocessors, by Daniel Tabak, McGraw-Hill, Inc., ISBN 0-07-062843-2, 1995.
11. **Head** refers to Claude D. Head, III, US Patent 6,076,652.
12. **Webster** refers to Webster's Third New International Dictionary, Merriam-Webster Inc, copyright 1993.
13. **Microsoft Computer Dictionary** refers to Microsoft Computer Dictionary, Fourth Edition, by Microsoft Press, JoAnne Woodcock as Senior Contributor, ISBN 0-7356-0615-3, May 1999.

Applicant's Remarks

14. Applicant asserts that Banks does not disclose certain limitations. Specifically, Applicant asserts that the Banks statement regarding models ("The model should be complex enough to

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answer the questions raised, but not too complex...”) is nothing that the person skilled in the art of the present invention could use.

15. However, the prosecution history of the present application contains substantial discussion regarding the exact boundaries of the claimed invention. One issue is whether Applicant’s prior claim term (“comprehensive mimic image”) was disclosed by Bank’s disclosure (“complex enough”), in the view of one of ordinary skill in the art. The Examiner maintains that Banks discloses the previous claim term “comprehensive mimic image”, as discussed in detail in the prior action. Note that the new claims use the slightly broader term “mimic image”, which is similarly disclosed by Banks.
16. All old claims are cancelled, thus all prior objections and rejections are moot.
17. The new claims are discussed below, accompanied with new rejections.

Claim Objections

18. Claim 41 is objected to for giving a term a meaning which is repugnant to the usual meaning of the term. Specifically, a “**data carrier**” is used to “memorize” software. Note that the term “carrier” is defined by Microsoft Dictionary as “In communications, a specified frequency that can be modulated to convey information.” The difficulty with Applicant’s terminology is that frequency carriers contain information only in a transient sense, they do not store data in a permanent sense. Further, there are 35 USC 101 issues with attempting to claim electromagnetic waves.
19. Additionally, in the context of the specification and claims, the Applicant appears to use the term “data carrier” as equivalent to “portable memory” (using Tabak’s terminology), and Applicant apparently does not intend “carrier” to be interpreted per Microsoft Dictionary.
20. Thus, the Examiner objects to Applicant’s “data carrier” term in claim 41 as repugnant, because the term “data carrier” has a specific meaning (term of art) which is not intended by the Applicant.
21. See MPEP 608.01(o), emphasis added:

608.01(o) Basis for Claim Terminology in Description

The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import; and in mechanical cases, it should be identified in the descriptive portion of the specification by reference to the drawing, designating the part or parts therein to which the term applies. A term used in the claims may be given a special meaning in the description. **No term may**

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be given a meaning repugnant to the usual meaning of the term.

Usually the terminology of the original claims follows the nomenclature of the specification, but sometimes in amending the claims or in adding new claims, new terms are introduced that do not appear in the specification. The use of a confusing variety of terms for the same thing should not be permitted.

New claims and amendments to the claims already in the application should be scrutinized not only for new matter but also for new terminology. While an applicant is not limited to the nomenclature used in the application as filed, he or she should make appropriate amendment of the specification whenever this nomenclature is departed from by amendment of the claims so as to have clear support or antecedent basis in the specification for the new terms appearing in the claims. This is necessary in order to insure certainty in construing the claims in the light of the specification, *Ex parte Kotler*, 1901 C.D. 62, 95 O.G. 2684 (Comm'r Pat. 1901). See 37 CFR 1.75, MPEP § 608.01(i) and § 1302.01.

The specification should be objected to if it does not provide proper antecedent basis for the claims by using form paragraph 7.44.

35 USC § 101-statutory subject matter-Ex parte Lyell

22. 35 U.S.C. 101 reads as follows: Whoever invents or discovers any new and useful **process, machine, manufacture, or composition of matter**, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
23. **Claims 46-48 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter.
24. Claim 46 never expressly claims a 35 USC 101 statutory class, but merely states “A control unit and a bus, connected to at least one apparatus used in an industrial process via said bus, wherein said control unit memorizing a software, said software being a specification of at least one apparatus containing a mimic image of said at least one apparatus including parameters, functionalities and programs of said at least one apparatus, and said software providing said control unit with said specification of said at least one apparatus.”
25. Thus, claim 46 initially appears to be a “machine” per 35 USC 101 (“A control unit and a bus”, but then appears to introduce “process” type limitations (“memorizing... providing”). Thus, claim 46 improperly embraces or overlaps two different statutory classes of invention.
26. See MPEP 2173.05(p)(II), which states:

A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a “process” nor a “machine,” but rather embraces or overlaps

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two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. at 1551.

27. Also see MPEP 2106 regarding computer related inventions.

28. Note that “software” is generally not patentable as such, but must be claimed as process steps, or as machine, or as manufacture. For example, software may be claimed as machine or [article of] manufacture by stating “a computer readable media containing instructions, which when executed, cause the following steps to be performed”.

29. Claims 47-48 depend from claim 46, and are rejected for the same reason.

Claim Interpretation

30. In claim 38, the term “An apparatus **used in an industrial process in conjunction with a central control unit and a bus for connecting the apparatus to the central control unit**, the apparatus having” is interpreted as merely intended use, and “having” is interpreted as comprising. See MPEP 2173.05(p)(II), which states that 35 USC 101 statutory classes may not be combined in a single claim.

31. In claim 38, the term “**mimic image**” is interpreted in view of the specification. Specification page 2 paragraph 2 states “software apparatus model is memorized which contains a comprehensive mimic image of the apparatus including its parameters, functionality and sequence programs”. Specification page 2 paragraph 3 states “apparatus models... simulated for testing it in including all parameters and functionalities contained in the apparatus models.” In conclusion, a “mimic image” appears to be a software model including parameters, functionalities, and sequence programs.

32. In claim 38, and 42, the term “**memorized software which is a specification of the apparatus containing a mimic image of the apparatus, said mimic image including parameters, functionalities and programs of the apparatus**” is interpreted as “memory including parameters, functionalities and programs of the apparatus”.

33. Note that the intervening/internal term “which is a specification of the apparatus containing a mimic image of the apparatus, said mimic image” is not given patentable weight during the claim interpretation.

34. Specifically, the intervening terms “specification of the apparatus” and “mimic image of the apparatus” appear not to add any meaning to (and appear not to further limit) the final term

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“including parameters, functionalities and programs of the apparatus”. The Examiner suggests that said intervening terms should be deleted, in order to improve the clarity and conciseness claim 40.

35. In claim 41, the term “**data carrier**” is interpreted as “portable memory” (using Tabak’s terminology).

35 USC § 112-Second Paragraph-indefinite claims

36. The following is a quotation of the second paragraph of 35 U.S.C. 112: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
37. **Claims 40 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
38. In claim 40, the term “software is memorized in a version permitting **optimum use to be made of the available memory capacity** in the apparatus” is not clear. Specifically, “optimum use” is not defined. Possibly Applicant intends some data compression techniques. Alternately, possibly Applicant intends using a high level language such as “C++” which is a very efficient and dense way of describing a model (in comparison to low level languages).
39. Note that one of the cancelled claims previously used the term “memorized in a version permitting **use to be made of the available memory capacity** in said apparatus”, and was previously rejected as disclosed by Tucker at Page 2171 “Memory Management...The two most common strategies for managing the available storage list are (1) first fit and (2) best fit. In the first-fit strategy, the list of available storage is kept by increasing address....In the best-fit strategy, the list of available storage blocks is kept in increasing order of size. When a request for storage is mad, the smallest block that will satisfy the request is used. As before, if the block is larger than the requested size the remaining storage is returned to the list. When a block is returned to the heap, it is placed on the list in order of its size”.
40. Thus, it is not clear whether or not Applicant is attempting to modify the meaning of said term, and/or possibly introduce new matter into the specification.

Claim Rejections - 35 USC § 102(b)

41. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
42. **Claim 38-40, and 40-45 are rejected under 35 U.S.C. 102(b) as being anticipated.**
43. Claim 38 is rejected under 35 U.S.C. 102(b) as being anticipated by Banks.
44. Claim 38 is an independent “apparatus” claim with 3 limitations, numbered by the Examiner for clarity.
45. [1]-“**An apparatus**” is disclosed by Banks at Page 524 “Resources are used to manufacture products. **Resources include machines** and human beings as well as tools, fixtures, material handling systems, storage areas and so on”.
46. [2]-“**having memorized software... including parameters, functionalities and programs of the apparatus**” is disclosed by Banks at Page 6 “A model is a representation of an actual system”, and at Page 7 “A resource is an entity that provides service to dynamic entities”, and at Page 397 “many existing simulation languages using object terminology”, and at Page 398 “Resource objects and their behavior may be defined”.
47. [3]-“**said memorized software is loadable from the apparatus into the central control unit via the bus**” is disclosed by Banks at Page 397 “portable models”. Note that models must be storable in a memory at another location in order to be portable. Additionally, note that it is inherent that a simulation model object (such as a software apparatus model) in an object-oriented simulation will be stored in memory, and that this memory will be accessed during the simulation. Note that Banks at Page 398 states “C++ is an object-oriented extension to the C programming language”.
48. Although not very clearly indicated, it appears that Applicant’s intent is that that the apparatus includes memory containing a model of the apparatus. Note that one illustrative example of Banks’ “portable models” would be a floppy disk or Compact Disk which often is included in the purchase of a printer for a personal computer. Said floppy or CD contains “memorized software... including parameters, functionalities, and programs of the

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apparatus". Said floppy or CD would be placed into the proper slot of a personal computer, and downloaded through a bus into the memory of the personal computer. This type of "portable model" (ie., printer driver on a CD) has certain advantages such as convenience. However, this use CDs does contain several drawbacks as well: the added expense of the CD itself, the possibility of losing the CD, and the substantial version control difficulties with correcting or upgrading existing CDs.

49. Alternately, central control of software (for example, downloading the printer driver software directly from the printer company website through the internet) offers the advantage of centrally controlling and instantly correcting or upgrading the available software, as well as the reduced cost of not creating and not handling CDs.

50. *In re Preda*, 401 F.2d 825, 159 USPQ 342, 344 (CCPA 1968) states "in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." Thus, one of ordinary skill in the art would interpret Banks as including disclosing porting said "portable models" (Banks terminology) using standard porting techniques, such as physically carrying a CD, or transferring over a bus. Said printer CD is one well known example. See also MPEP § 2144.04(VI)(C). *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) states "the particular placement provided no novel or unexpected result".

51. Claim 39 is rejected under 35 U.S.C. 102(b) as being anticipated by Banks.

52. Claims 39 depends from claim 38, with one additional limitation.

53. **"said software is formulated in a uniform program language with which said functionality and said parameters of the apparatus can be explicitly simulated in the control unit"** is disclosed by Banks Page 397 "many existing simulation languages" and Page 389 "C++ is an object-oriented extension to the C programming language". Also see Page 409 "YANSL" and "GPSS/H" and "SLAM" and "SIMAN" and "INSIGHT". 

54. In claim 40, **"said software is memorized in a version permitting optimum use to be made of the available memory capacity in the apparatus"** is disclosed by disclosed by Banks Page 397 "many existing simulation languages" and Page 389 "C++ is an object-

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oriented extension to the C programming language”. Also see Page 409 “YANSL” and “GPSS/H” and “SLAM” and “SIMAN” and “INSIGHT”.

55. Claim 44 is rejected under 35 U.S.C. 102(b) as being anticipated by Banks.
56. Claim 44 is an independent “method” claim with 2 limitations, numbered by the Examiner for clarity.
57. [1]-“**loading the software of the apparatuses to be employed in the plant into the central control unit**” is disclosed by Banks at Page 33 “Modeling Principle 2 The secret to being a good modeler is the ability to remodel” and “Modeling Principle 3 The modeling process is evolutionary because the act of modeling reveals important information piecemeal...The modeling process continues until additional detail or information is no longer necessary...relationships between the system under study and the model are continually defined and redefined. Simulations of the model provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model.”
58. [2]-“**simulating the operation of the plant by including all parameters and functionalities contained in the software by means of a software program sequenced in the control unit**” is disclosed by Banks at Page 33 “Modeling Principle 2 The secret to being a good modeler is the ability to remodel” and “Modeling Principle 3 The modeling process is evolutionary because the act of modeling reveals important information piecemeal...The modeling process continues until additional detail or information is no longer necessary...relationships between the system under study and the model are continually defined and redefined. Simulations of the model provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model.”
59. Claim 45 is rejected under 35 U.S.C. 102(b) as being anticipated by Banks.
60. Claims 45 depends from claim 38, with one additional limitation.
61. “**modifying any apparatus by the central control unit as a function of the result of said simulation**” is disclosed by Banks at Page 33 “Modeling Principle 2 The secret to being a good modeler is the ability to remodel” and “Modeling Principle 3 The modeling process is evolutionary because the act of modeling reveals important information piecemeal...The modeling process continues until additional detail or information is no longer necessary...relationships between the system under study and the model are continually

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defined and redefined. Simulations of the model provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model”, and page 18 “uses it [simulation analysis] to make a decision... successful implementation”.

Claim Rejections - 35 USC § 103

62. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
63. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: 1. Determining the scope and contents of the prior art. 2. Ascertaining the differences between the prior art and the claims at issue. 3. Resolving the level of ordinary skill in the pertinent art. 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
64. **Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable.**
65. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Tabak and Tucker.
66. Claim 41 depends from claim 38, with one additional limitation.
67. The additional limitation is not expressly disclosed by Banks.
68. “**data carrier**” is disclosed by Tabak at page 44 “Magnetic disks belong to the category of secondary memory; they are very useful in information porting from system to system”.
69. **At the time** of the invention, one of ordinary skill in the art would be motivated to combine Tabak with Banks in order to conveniently port Banks’ “portable model” from one system to another system. Said porting may be accomplished either by standard methods including: physically transporting said magnetic disk from a first system to a second system, or alternately by reading the magnetic disk in the first system and bussing the data to the second system.
70. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Head.

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71. Claim 42 is an independent “plant” claim with 5 limitations, numbered by the Examiner for clarity.
72. [1]-“**An apparatus**” is disclosed by Banks at Page 524 “Resources are used to manufacture products. **Resources include machines** and human beings as well as tools, fixtures, material handling systems, storage areas and so on”.
73. [2]-“**having memorized software... including parameters, functionalities and programs of the apparatus**” is disclosed by Banks at Page 6 “A model is a representation of an actual system”, and at Page 7 “A resource is an entity that provides service to dynamic entities”, and at Page 397 “many existing simulation languages using object terminology”, and at Page 398 “Resource objects and their behavior may be defined”.
74. [5]-“**wherein the software of each apparatus being loadable into said central control unit so that the operation of the plant can be simulated by testing all parameters and functionalities in said software**” is disclosed by Banks at Page 397 “portable models”. Note that models must be storable in a memory at another location in order to be portable. Additionally, note that it is inherent that a simulation model object (such as a software apparatus model) in an object-oriented simulation will be stored in memory, and that this memory will be accessed during the simulation. Note that Banks at Page 398 states “C++ is an object-oriented extension to the C programming language”.
75. The additional limitations are not expressly disclosed by Banks.
76. [3]-“**a bus**” is disclosed by Head at Abstract “An automated assembly line is controlled by a computer system...The work stations are then controlled by the computer system”. The Examiner takes Official Notice that it is well known in the art to for computer systems to be centrally controlled and to communicate to external devices via a bus. Central control reduces costs by sharing resources (such as memory, CPU, and possibly a human operator), and also manages potential conflicts between peripheral devices. Further, buses are a simple and inexpensive way to communicate without the expense, complexity, and possible interference of electromagnetic communications.
77. The Applicant is entitled to traverse the official notice according to MPEP § 2144.03. However, MPEP § 2144.03 further states “See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information

or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice).” Specifically, *In re Boon*, 169 USPQ 231, 234 states “as we held in *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed”. Further note that 37 CFR § 1.671(c)(3) states “Judicial notice means official notice”. Thus, a traversal by the Applicant that is merely “a bald challenge, with nothing more” will be given very little weight.

78. [4]-“**a central control unit connected to each apparatus via said bus**” is disclosed by Head at Abstract “An automated assembly line is controlled by a computer system...The work stations are then controlled by the computer system”.
79. **At the time** of the invention, one of ordinary skill in the art would be motivated to combine Head with Banks in order to inexpensively and efficiently and centrally control and/or simulate plant systems comprising one or more apparatuses. See also MPEP § 2144.04(VI)(C). *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) states “the particular placement provided no novel or unexpected result”. In this claim, placing the individual apparatus models in memory attached to (or associated with) each individual apparatus is merely specifying a particular physical placement of said models, with no novel or unexpected result in comparison to the standard method of storing said models in a single central location.
80. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Head.
81. Claim 43 depends from claim 42, with one additional limitation.
82. “**said software are modifiable by said central control unit depending on the result of simulation**” is disclosed by Banks at Page 33 “Modeling Principle 2 The secret to being a good modeler is the ability to remodel” and “Modeling Principle 3 The modeling process is evolutionary because the act of modeling reveals important information piecemeal...The modeling process continues until additional detail or information is no longer necessary...relationships between the system under study and the model are continually

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defined and redefined. Simulations of the model provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model.”

83. **At the time** of the invention, one of ordinary skill in the art would be motivated to combine Head with Banks in order to inexpensively and efficiently and centrally control and/or simulate plant systems comprising one or more apparatuses. See also MPEP § 2144.04(VI)(C). *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) states “the particular placement provided no novel or unexpected result”. In this claim, placing the individual apparatus models in memory attached to (or associated with) each individual apparatus is merely specifying a particular physical placement of said models, with no novel or unexpected result in comparison to the standard method of storing said models in a single central location. Further, the motivation to combine Banks’ “modeling principle 2...[and] modeling principle 3” is to iteratively “provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model”.

Conclusion

84. All pending claims stand rejected. There are substantial issues regarding terminology, and regarding 35 USC 101.

Communication

85. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Tuesday through Friday from 9:00 AM to 8:00 PM. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner’s supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone number for this group is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

* * * *


HUGH JONES
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2123